

## Claims

1. A process for producing anatase titania or a composite oxide containing the anatase titania characterized in that a gel containing a metal oxide is formed from a solution containing a hydrolyzable titanium compound, and subsequently this gel is allowed to react with water at a temperature of 100°C or below to produce the anatase titania or the composite oxide containing the anatase titania.

2. A process according to claim 1 wherein the solution containing a hydrolyzable titanium compound contains an organic polymer, and the gel is organic inorganic composite matter containing a metal oxide and the organic polymer.

3. A process according to claim 2 wherein the organic polymer is a water-soluble organic polymer.

4. A process according to any one of claims 1 to 3 wherein the hydrolyzable titanium compound is an alkoxide of titanium.

5. A process according to any one of claims 1 to 4 wherein reaction of the gel with water is carried out with hot water.

6. A process according to claim 5 wherein a functional molecule or a metal ion is dissolved in the hot water, thereby to dope the anatase titania or the composite oxide containing the anatase titania with the functional molecule or metallic

particles.

7. A process according to any one of claims 1 to 6 wherein a gel film is formed on a substrate and then allowed to react with water to produce a film.

8. The anatase titania or the composite oxide containing the anatase titania obtained according to any process of claims 1 to 7.

9. A transparent film of the composite oxide and a substrate having the transparent film of the composite oxide formed thereon as described in claim 8.

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A1  
Cm4

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